
Route 1 Multimodal Improvements Study

Public Information Meeting No. 1

Virtual via GoToWebinar

December 16, 2020

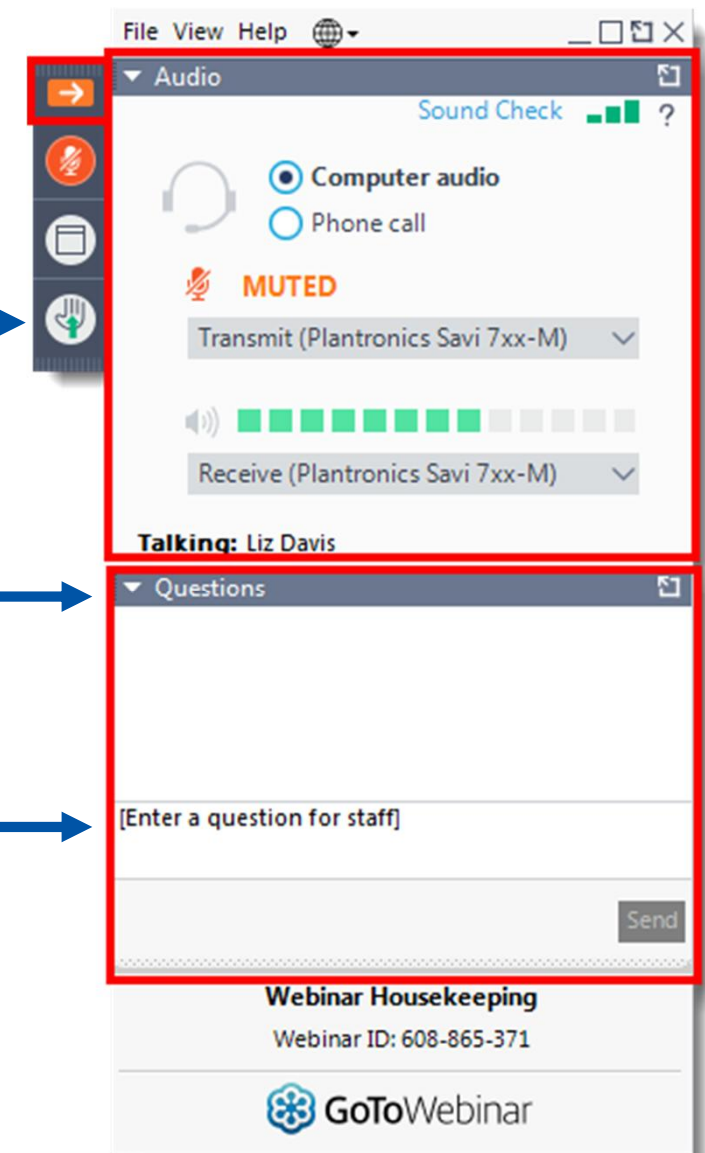


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 - Type in *[Enter a question for staff]* to ask a written question
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Desktop View

Route 1 Multimodal Improvements Study – PIM #1



Tonight's Agenda

1. Route 1 Multimodal Improvements – *Study Overview*
2. Existing Conditions Analysis – *Summary of Findings*
3. Online Survey – *Summary of Input Received*
4. Concept Design Considerations – *Brief Overview*
5. Next steps



Study Overview



Commonwealth of Virginia Commitment

Memorandum of Understand (MOU) between Commonwealth and Amazon.com Services, Inc.

- Section 5 – Transportation Projects:

... Commonwealth commits its best efforts, in collaboration with local officials in the Eligible County, to expeditiously evaluate and implement opportunities to improve safety, accessibility, and the pedestrian experience crossing Rt. 1 ...

Study Overview



Reason for this Study

Identify enhanced multimodal connectivity and accommodations along and across Route 1 in Crystal City, to meet the changing transportation needs of this growing urban activity center. The need for this study is two-fold:

- Multimodal transportation demand is increasing from the creation of an additional Amazon U.S. Headquarters (HQ2) and other ongoing development in the Crystal City and Pentagon City area
- These areas are already heavily developed with limited space for expanding the footprint of the transportation network

Study Overview



Route 1 Corridor

- Evolving
- Dynamic
- Urban
- Multimodal
- Growing
- Active
- Busy!
- Transit-friendly
- Ped-, bike-, and scooter-friendly



Study Overview



Previous Planning: [*Crystal City Sector Plan*](#)



- Route 1 urban boulevard with land uses fronting street
- The current Route 1 feasibility study will examine at-grade, existing elevated, and Sector Plan configurations

Study Overview



Goals

1. Safety – *improve multimodal safety for pedestrians, bicyclists, micro mobility modes, transit and vehicles along and crossing Route 1*
2. Multimodal Accessibility and Accommodation – *increase multimodal accessibility and accommodation along and crossing Route 1 – pedestrians, bicycles, transit, vehicles (and any other mode)*
3. Transit Effectiveness – *make transit more accessible, reliable, and convenient*
4. Vehicular Operations – *maintain an appropriate level of vehicular operation and accommodation along Route 1 and on intersecting streets—15th Street, 18th Street, 20th Street, and 23rd Street*
5. Environmental – *preserve, protect, or enhance the built, natural, visual, and social environments*
6. Urban Fabric – *integrate Route 1 with the urban fabric of Crystal City and Pentagon City*

Study Overview



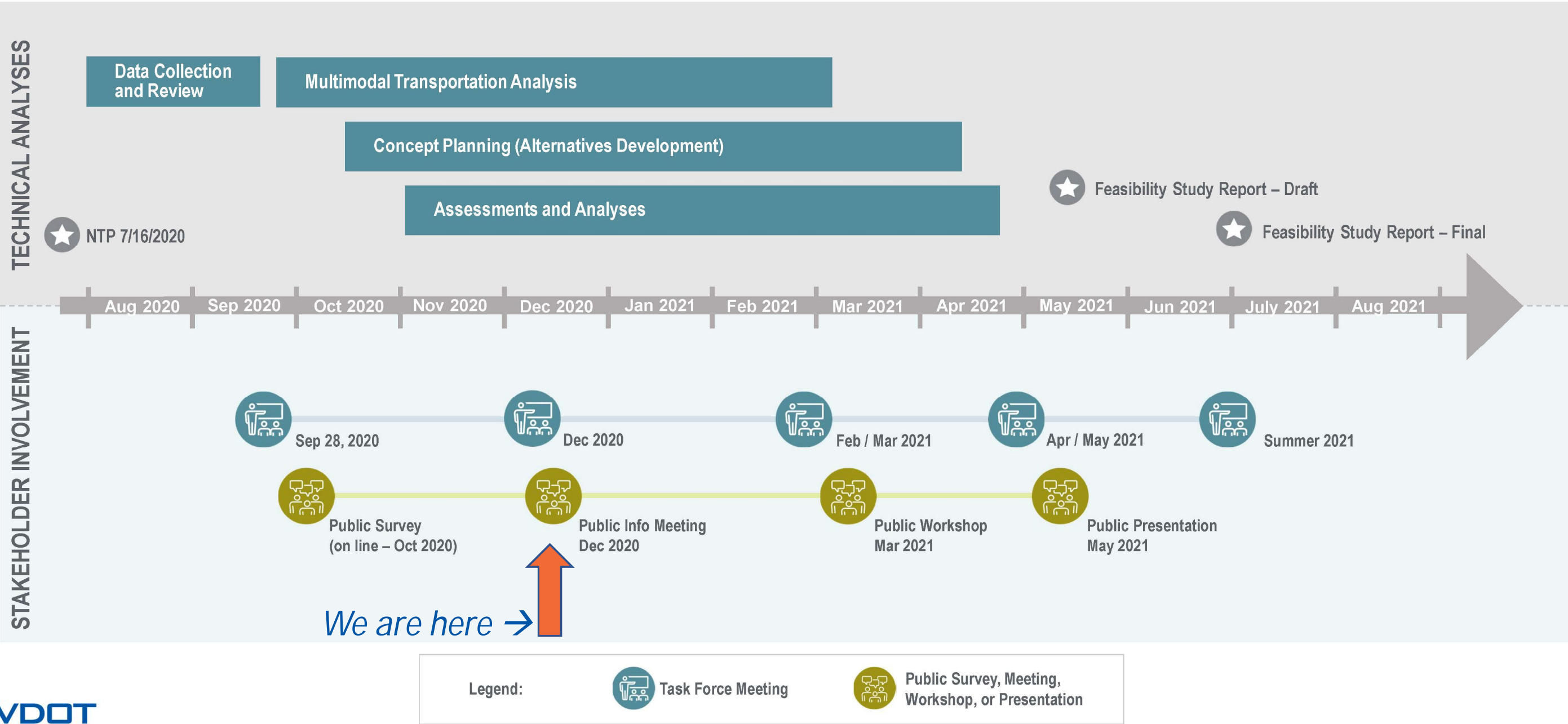
Scope

- Study of Route 1, from approximately 12th Street to 23rd Street South
 - Explore at-grade urban boulevard feasibility
 - Review and compare potential improvements to the current elevated condition and the urban boulevard described in the [Crystal City Sector Plan](#)
- Feasibility study which aims to provide sufficient information to make the best decision on a future project on Route 1 in Crystal City
- At-grade urban boulevard focus
 - Will compare with analysis of existing configuration and analysis of concepts presented in the Crystal City Sector Plan.
 - Seeking to understand potential costs and issues/solutions for constructability and multimodal access

Study Overview



Study Tasks and Schedule



Study Overview

Multimodal transportation analysis

- Safety analysis
- Existing conditions analysis
- Transportation forecasting - Years 2025 and 2040
- Future no build conditions analysis
- Future build conditions analysis

Analysis Study Area →



Study Overview

Concept planning, assessments, analyses

- Plan and profile studies
 - Cross sections
 - Alignments
 - Constructability
- Development of alternatives
 - Multimodal mobility assessment
 - Conceptual stormwater management strategy
 - Conceptual cost estimates
 - Redevelopment potential assessment
- Feasibility study report

Concept Planning Study Area →



Study Overview



Task Force

- Represent their organization and participate in the Route 1 Multimodal Improvements study
- Provide feedback to VDOT and Arlington County on study findings and recommendations
- Advocate for input to the study from stakeholders and the general public

Task Force Members:

- Crystal City Citizens Review Council
- National Landing BID
- Arlington Ridge Civic Association
- Aurora Highlands Civic Association
- Crystal City Civic Association
- Arlington County Planning Commission
- Arlington County Transportation Commission
- Arlington County Bicycle Advisory Committee
- Arlington County Pedestrian Advisory Committee
- Arlington County Transit Advisory Committee
- Arlington County Transportation Division
- Virginia Railway Express (VRE)
- Washington Metropolitan Area Transit Authority (WMATA)
- City of Alexandria
- National Park Service
- Virginia Department of Transportation

Existing Conditions

Roadway and Bridge Infrastructure



Route 1 and S. Clark St. @ 23 St S looking north



Route 1 @ 20 St S looking south



Ramp to Route 1 from 15th St S looking north



Route 1 over 12th St S looking south to 15th St S

Existing Conditions

Safety Review

- Crashes per year have generally decreased over the past 5 years
- 0 fatalities, 1/3 of crashes resulted in injuries, remainder were property damage only
- Most crashes occurred at signalized intersections
- Route 1 northbound – majority of crashes near the I-395 interchange
- Route 1 southbound – majority of crashes between 12th Street S and 15th Street S and near Route 233



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Existing Conditions

Pedestrian Infrastructure and Operations

- Study area has an extensive sidewalk network and crosswalks at most locations at signalized intersections
- Most challenging and highest delay/wait times to cross Route 1 are at the following intersections:
 - Route 1 and 20th Street S/S Clark Street
 - Route 1 and 23rd Street S/S Clark Street

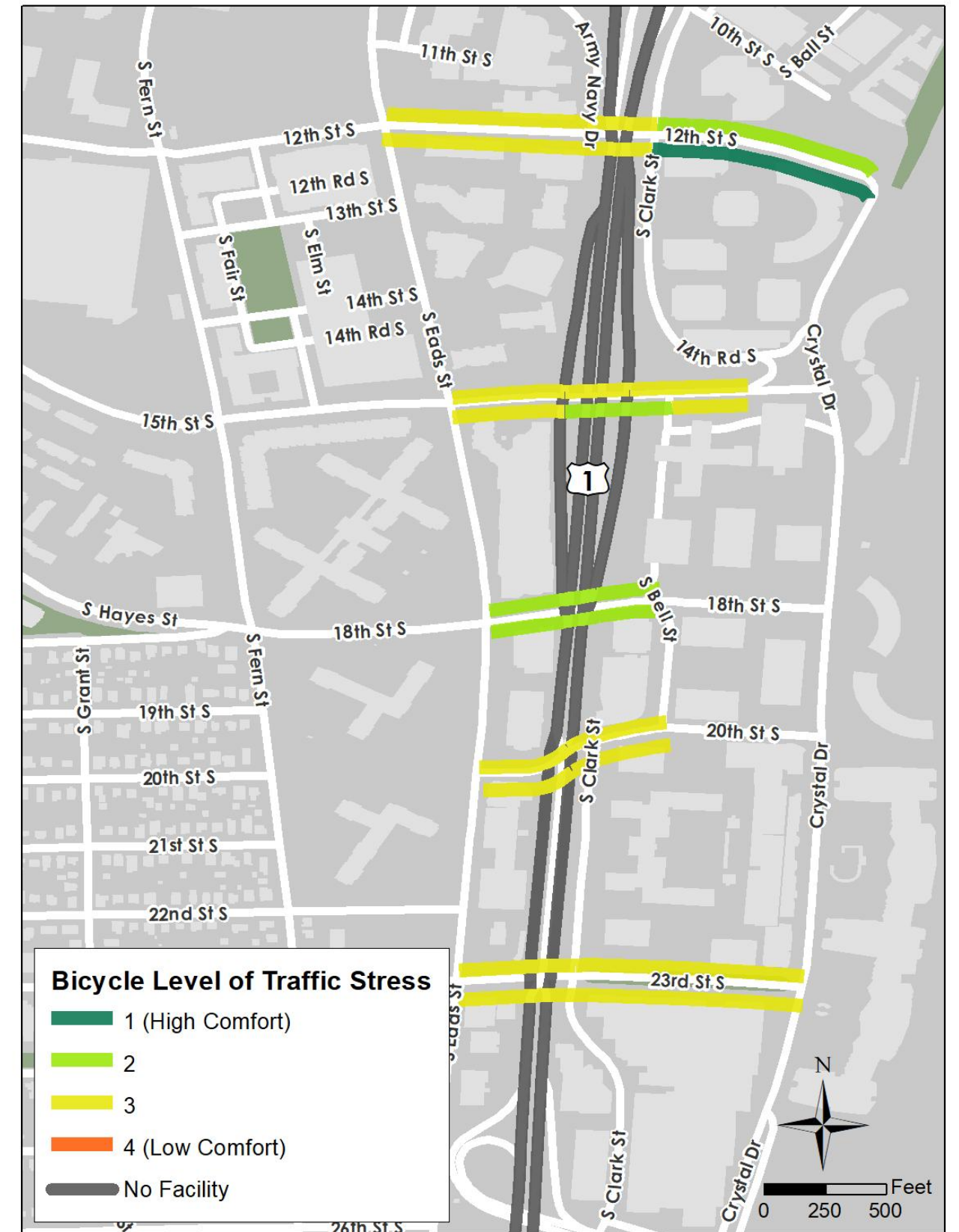


Existing AM/PM Peak Hour Pedestrian Delay

Existing Conditions

Bicycle Infrastructure and Operations

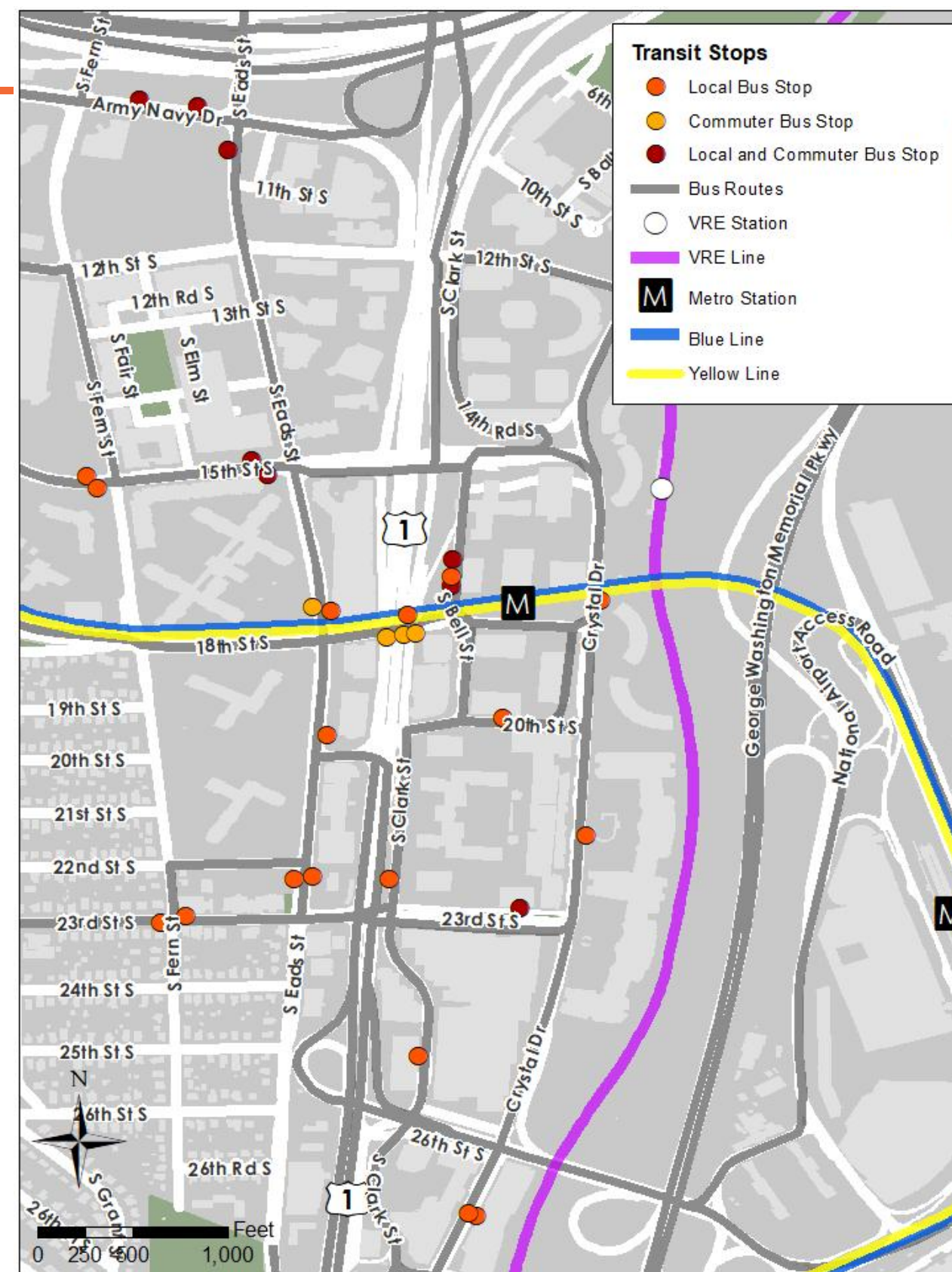
- On-street bicycle lanes – north/south
 - S Eads Street
 - Crystal Drive
- On-street bicycle lanes across Route 1
 - Eastbound 15th Street S
 - 18th Street S
- Most challenging and highest delay to cross Route 1 are at the following intersections:
 - Route 1 and 20th Street S/S Clark Street
 - Route 1 and 23rd Street S/S Clark Street



Existing Conditions

Transit Infrastructure and Operations

- Robust transit service in study area
 - Metrorail Blue and Yellow Line
 - Metroway
 - VRE
 - Local bus service
 - Commuter bus service
- AM and PM peak hour bus service experience delays at major intersections



Existing Conditions

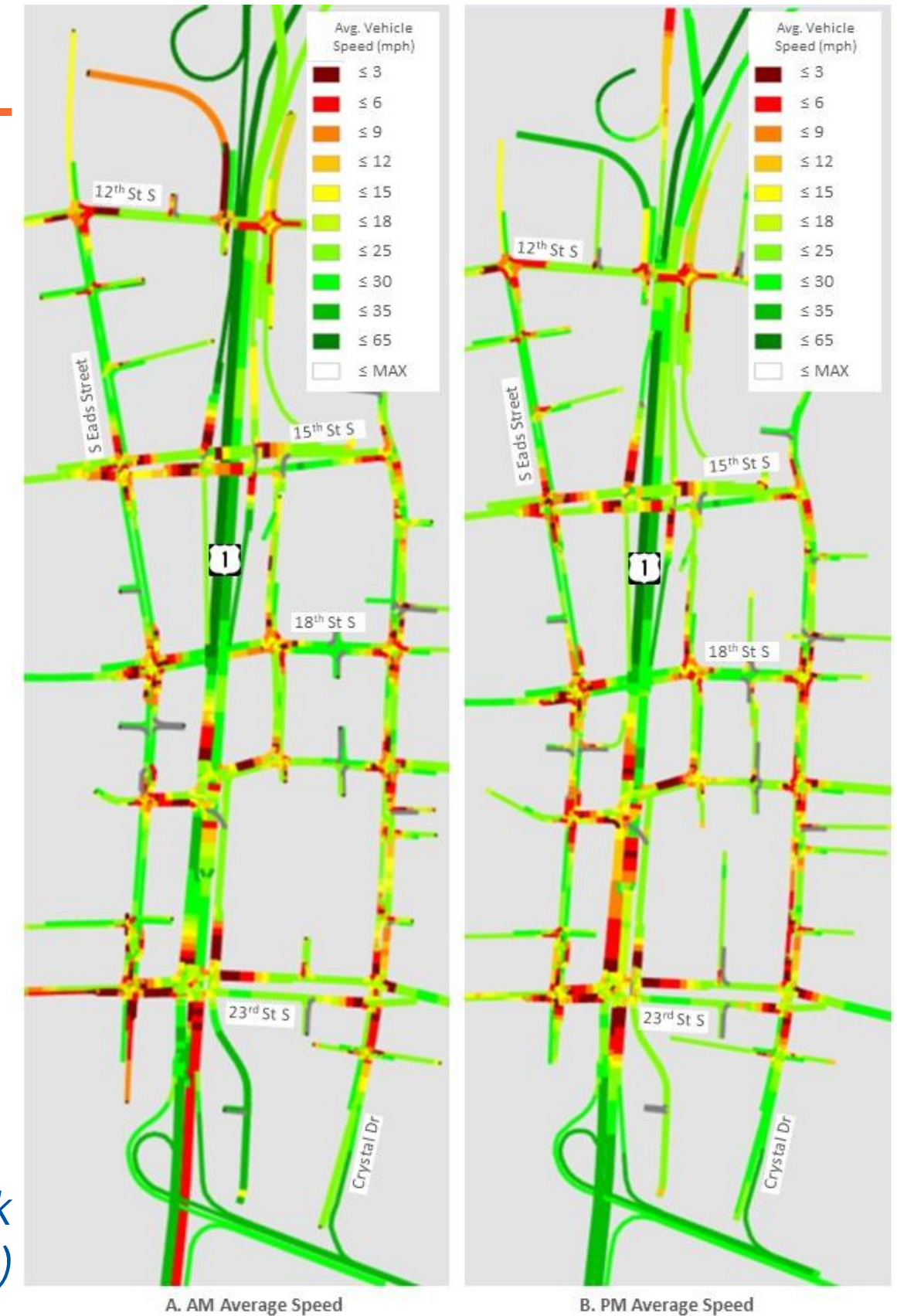
Vehicle Operations – existing challenges

- Route 1 and 15th Street S interchange
 - High demand between Pentagon City area and Route 1 north of study area
 - Eastbound 15th Street S to Route 1 northbound heavy left turn movement
 - Southbound Route 1 to westbound 15th Street S heavy right turn movement
- Route 1 at 20th Street S/S Clark Street
- Route 1 at 23rd Street S/S Clark Street
 - Arlington County project underway

*Vissim Operational Analysis Area AM and PM Peak
Hour Average Speed Maps (pre-COVID data)*



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Existing Conditions



Existing Environment and Urban Form

The built, natural, visual, and social environments all combine to create the urban form that exists today within the Route 1 corridor



Demolition of S Clark Street Bridge in early 2020 removed elevated S. Clark Street, creating opportunities for enhanced multimodal solutions and/or redevelopment that will front Route 1



Americana Motel front entrance altered by elevated Route 1, mid-1980s

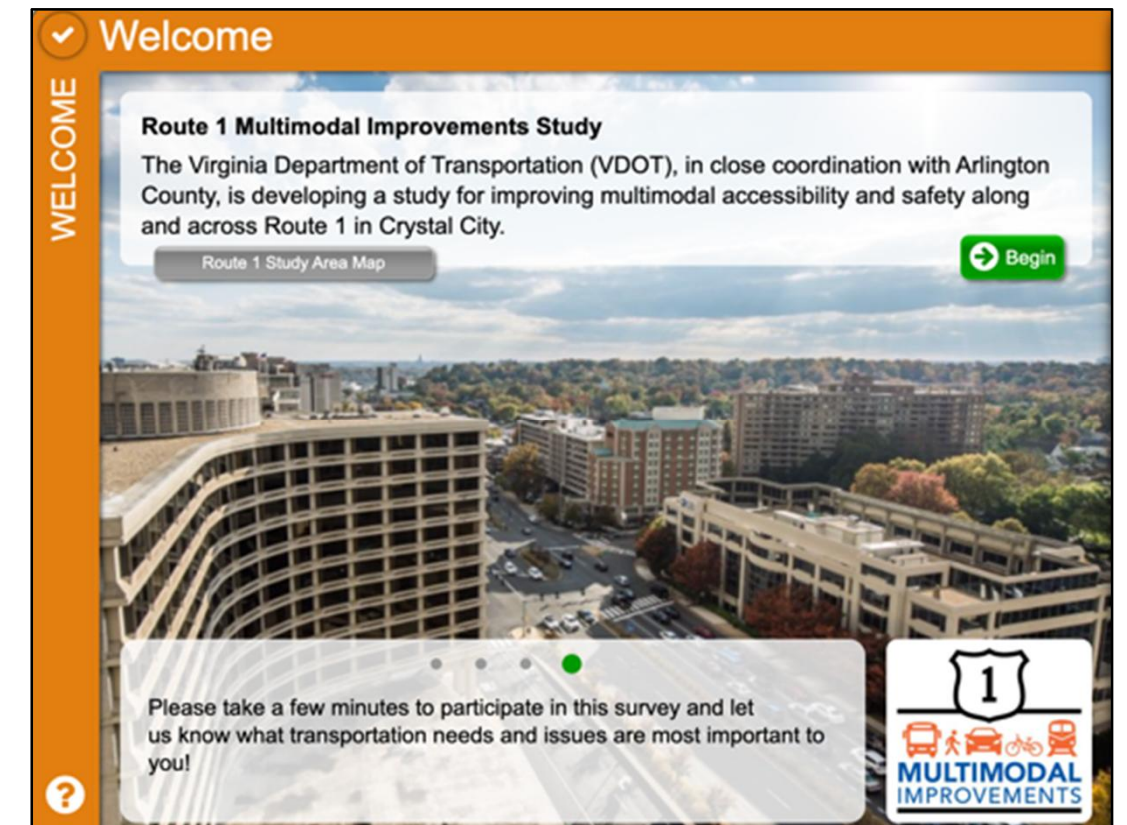


Online (MetroQuest) Survey



MetroQuest Survey

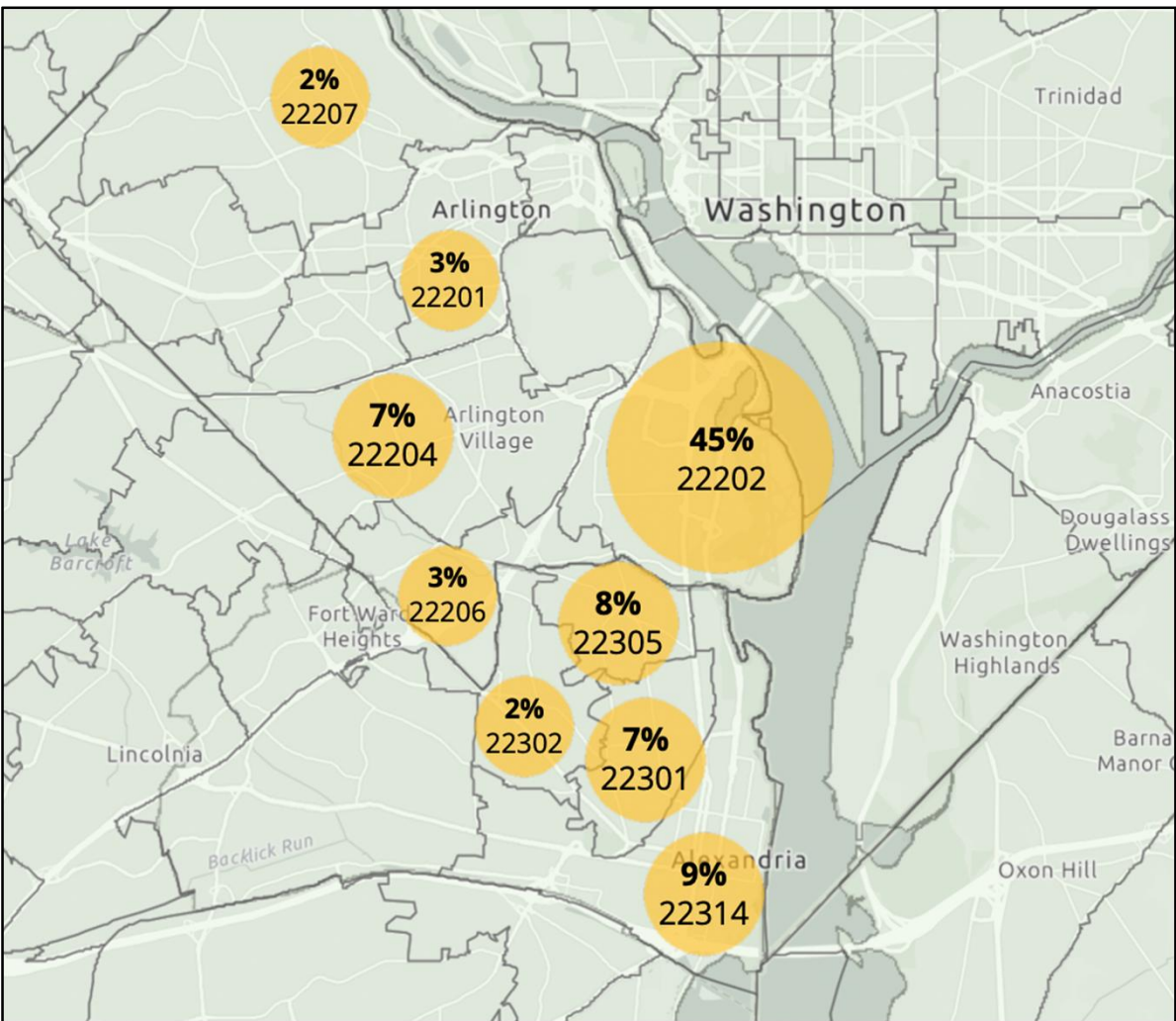
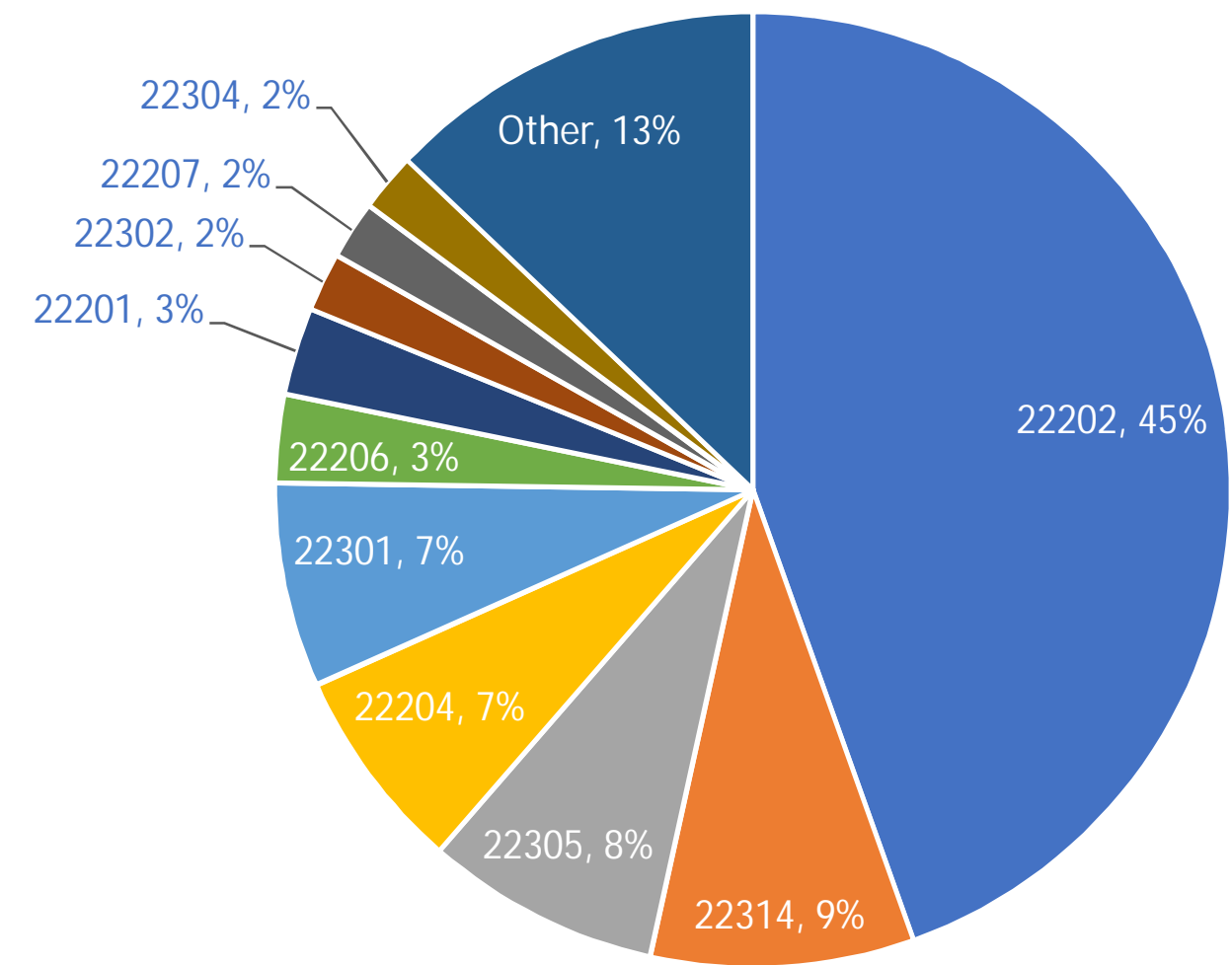
- Survey Summary
 - Open October 15th to November 16th
 - 1,224 unique survey responses received
- Advertising Strategies
 - Task Force Involvement
 - VDOT Study website
 - Press Release
 - Social Media (Facebook/Instagram/Twitter)
 - Local Newspaper



MetroQuest Survey Results



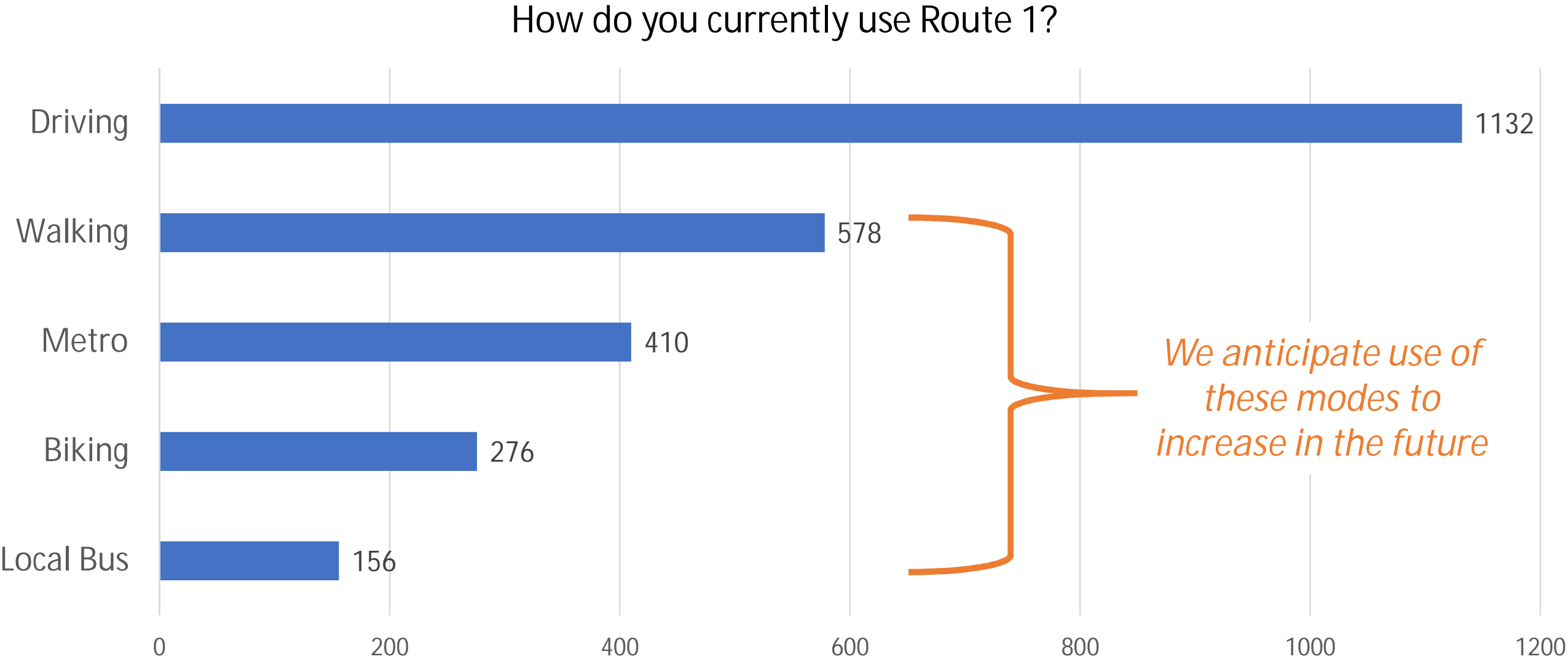
Participant by Home Zip Codes (Top 10)



MetroQuest Survey Results



Travel Survey – Takeaways

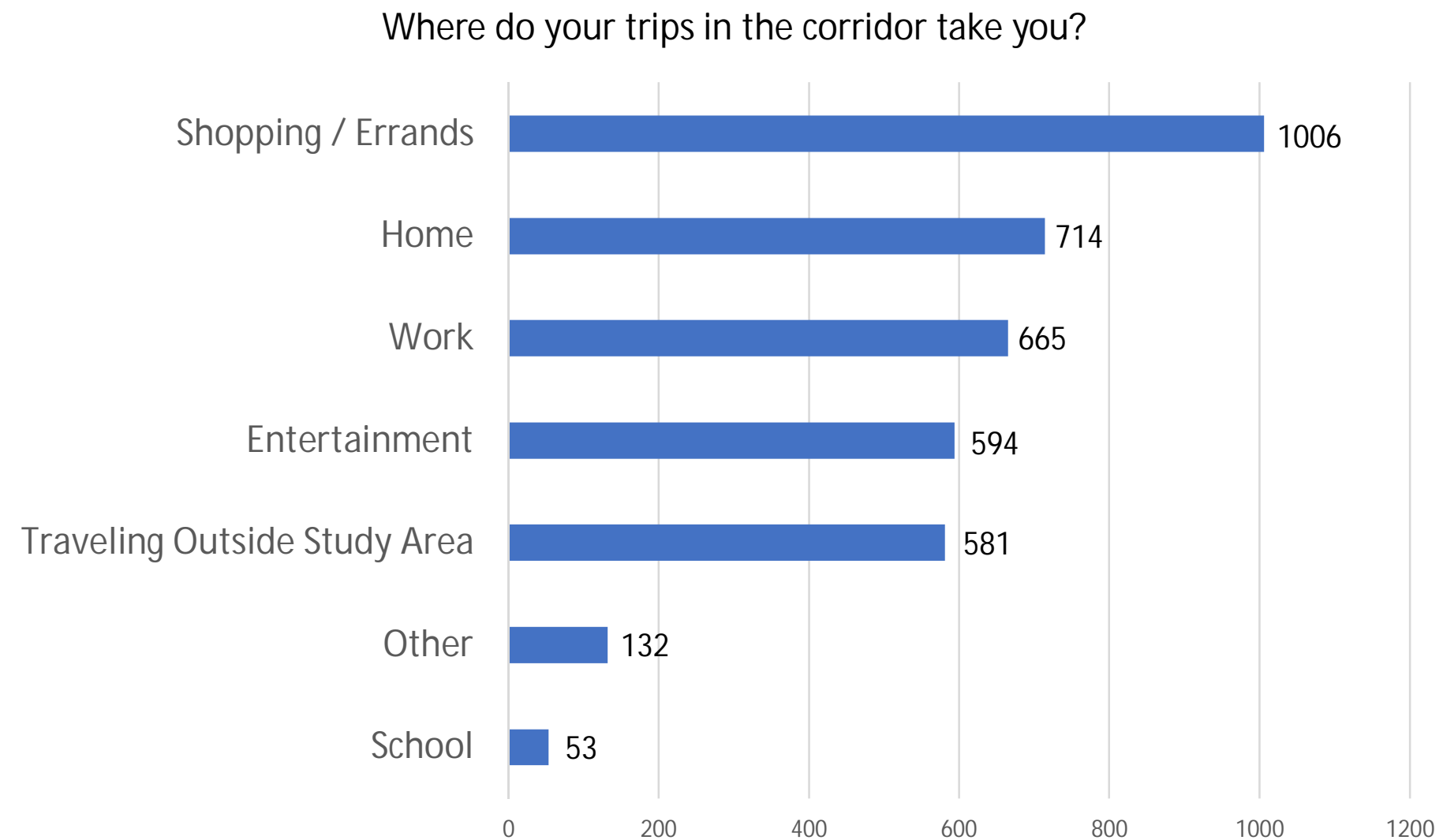


MetroQuest Survey Results



Travel Survey – Takeaways

- Frequency and Purpose
 - 67% of respondents travel daily or at least a few times per week
 - Trip purpose varied



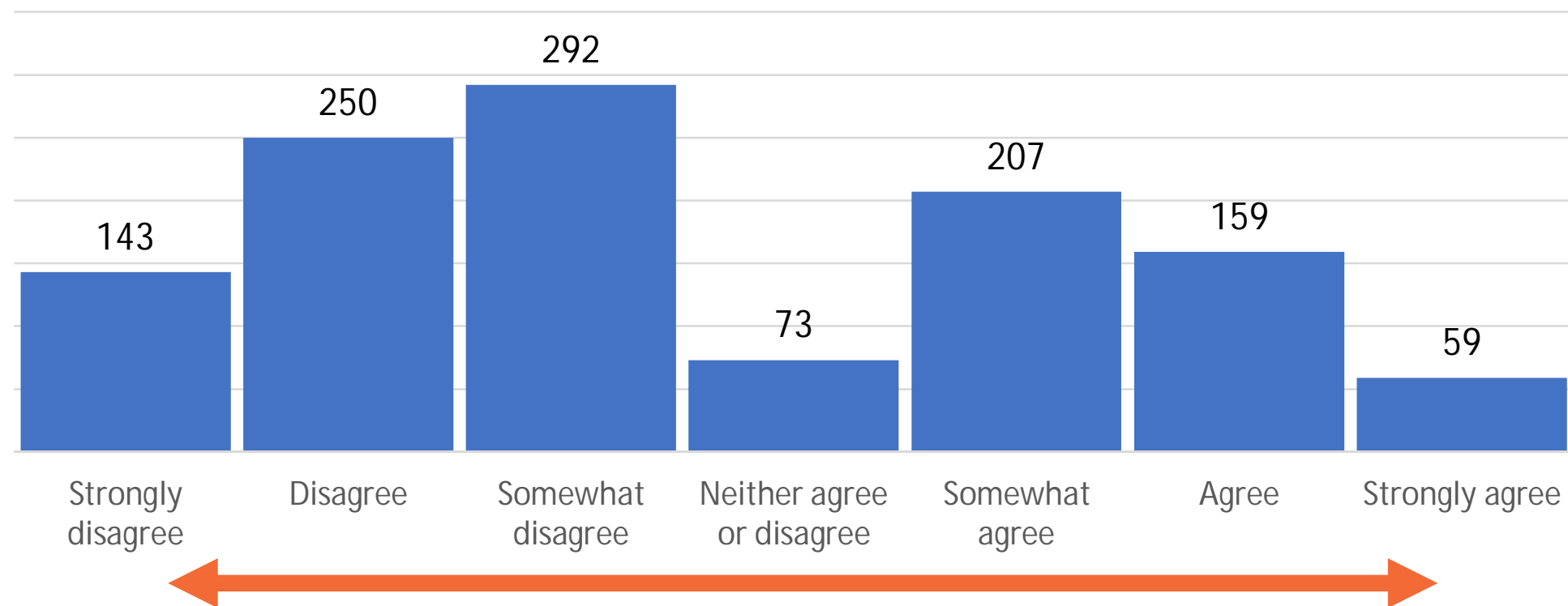
MetroQuest Survey Results



Travel Survey – Takeaways

■ Perspective

- *It is currently easy, safe, and effective to travel within and between Crystal City and Pentagon City.*
- 58% of participants responded with some level of disagreement to this statement

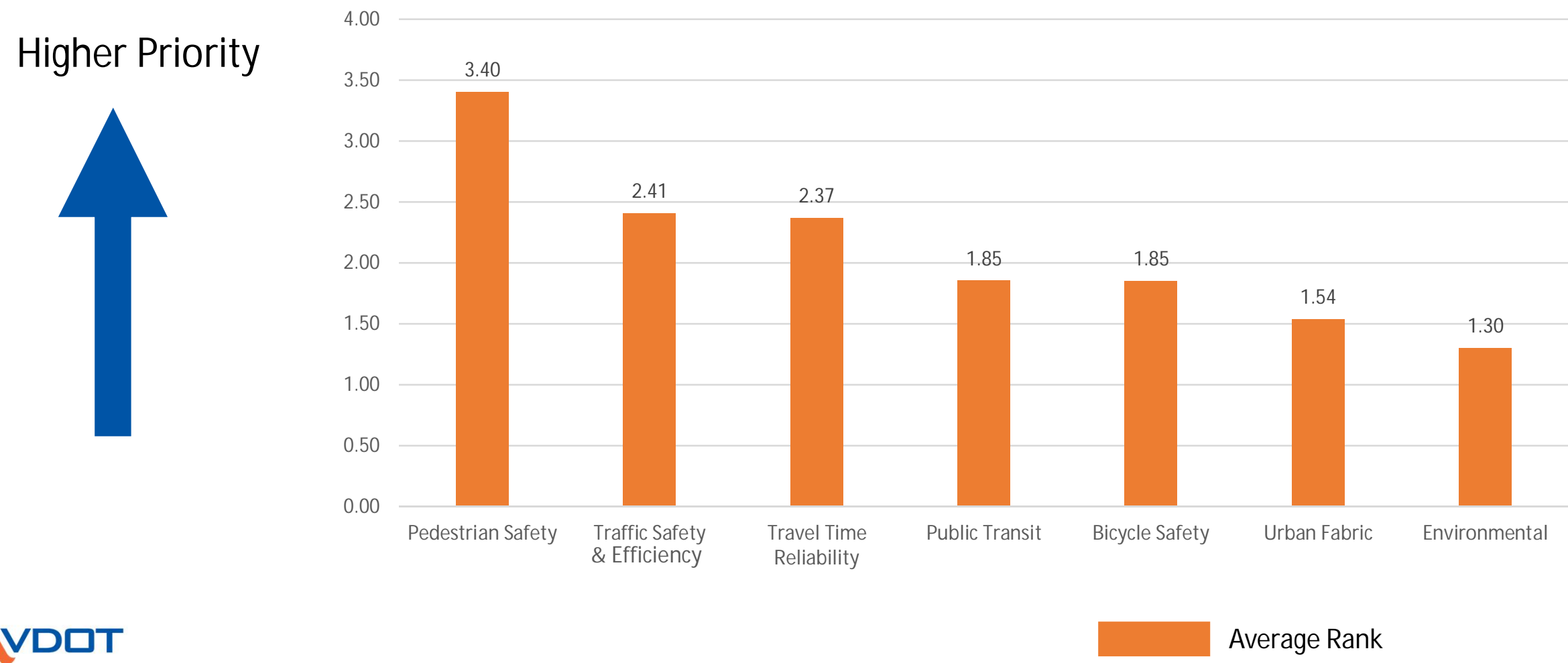


MetroQuest Survey Results



Order Your Top 5 Design Priorities:

- Pedestrian safety was ranked as the highest priority.



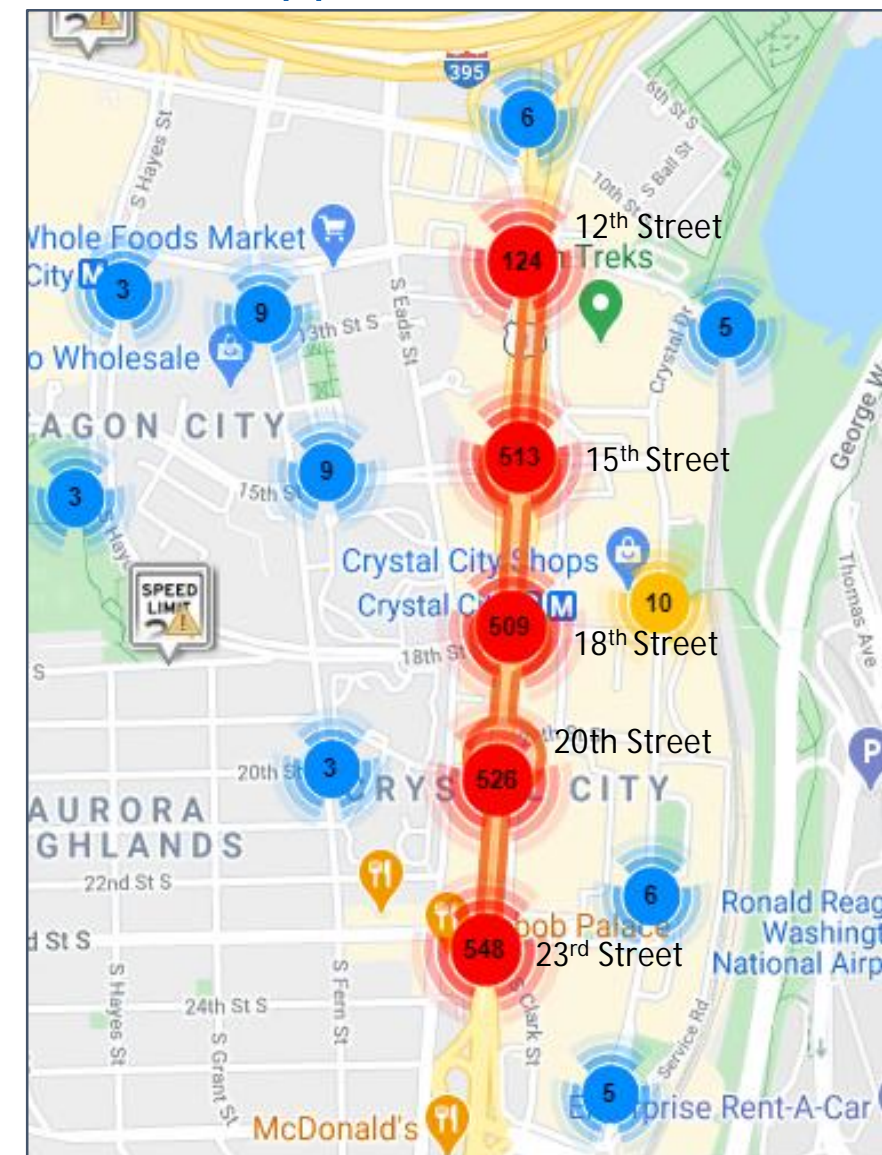
MetroQuest Survey Results



Map Markers Overview

- Summary of Pins in the Study Area
 - 2,319 Total
 - Most pins placed around intersection/nodes
 - Majority related to congestion and safety
 - Traffic signals not well-coordinated
 - Left turn lanes spilling back to through lane
 - Challenging crossing large intersections for pedestrians
 - Vehicles not yielding to pedestrians
 - Conditions at underpasses (lighting and cleanliness)

“Hot spot” Areas of Issues and Opportunities:



Source: MetroQuest Survey Site

MetroQuest Survey Results



Written Comments

- Total of 2,568 comments
- Sample comments:
 - Reduce long pedestrian crossing times; Improve sidewalks and continuous connections
 - Improve poorly timed traffic signals which lead to congestion and near misses
 - Need to address speeding in the area
 - Vehicle queues from highway ramps and left turn lane spill over into through travel lanes
 - Strong support for improved travel time reliability for public transit in corridor
 - Support to improve Metroway access
 - Desire for a more unified downtown, integrating Crystal City and Pentagon City
 - Need for bidirectional bike facilities; protected bike lanes
- Public input summary document posted to *project website*:
[Virginiadot.org/route1multimodalstudy](https://virginiadot.org/route1multimodalstudy)

"When driving, there's not a lot of visual clues that you're now driving in a place with many people walking and biking."

*"It is extremely difficult to walk across intersection. [23rd Street]
The median isn't really safe and there is very little time to actually cross all the lanes."*

*"Narrow crossing distances and increase ped walk time."
[15th Street]*

Concept Design Considerations

Building upon Crystal City Sector Plan



- Land use and multimodal transportation study
 - Implementation strategies and timelines
 - Concepts vetted through public participation
- Planning effort has led to projects built by Arlington County and private sector
- Current VDOT study to examine street elements:
 - Travel lanes and turn lanes
 - Transit stops and transit access
 - Sidewalks, pedestrian crossings, pedestrian refuges
 - Bicycle facilities
 - Urban form and open space



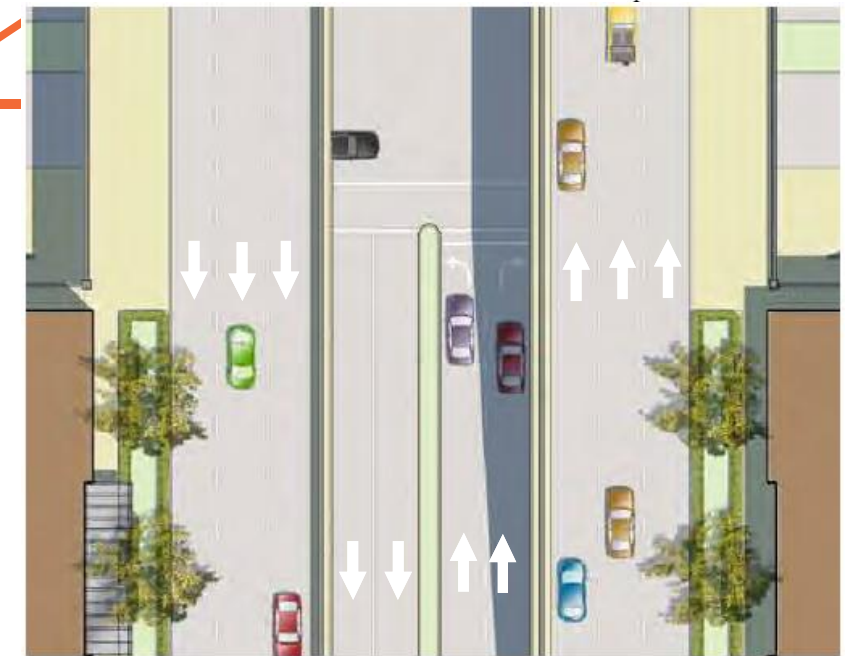
Concept Design Considerations

Example: 15th Street S Comparison

- Study will compare at-grade option with Sector Plan concepts
- Will also examine potential improvements to existing conditions
- Comparison focused mainly at intersections
- Possible that improvements to 15th St. S will require operational improvements at other intersections



Route 1/15th Street S – Sector Plan Option



Route 1@15th Street S
Sector Plan Option

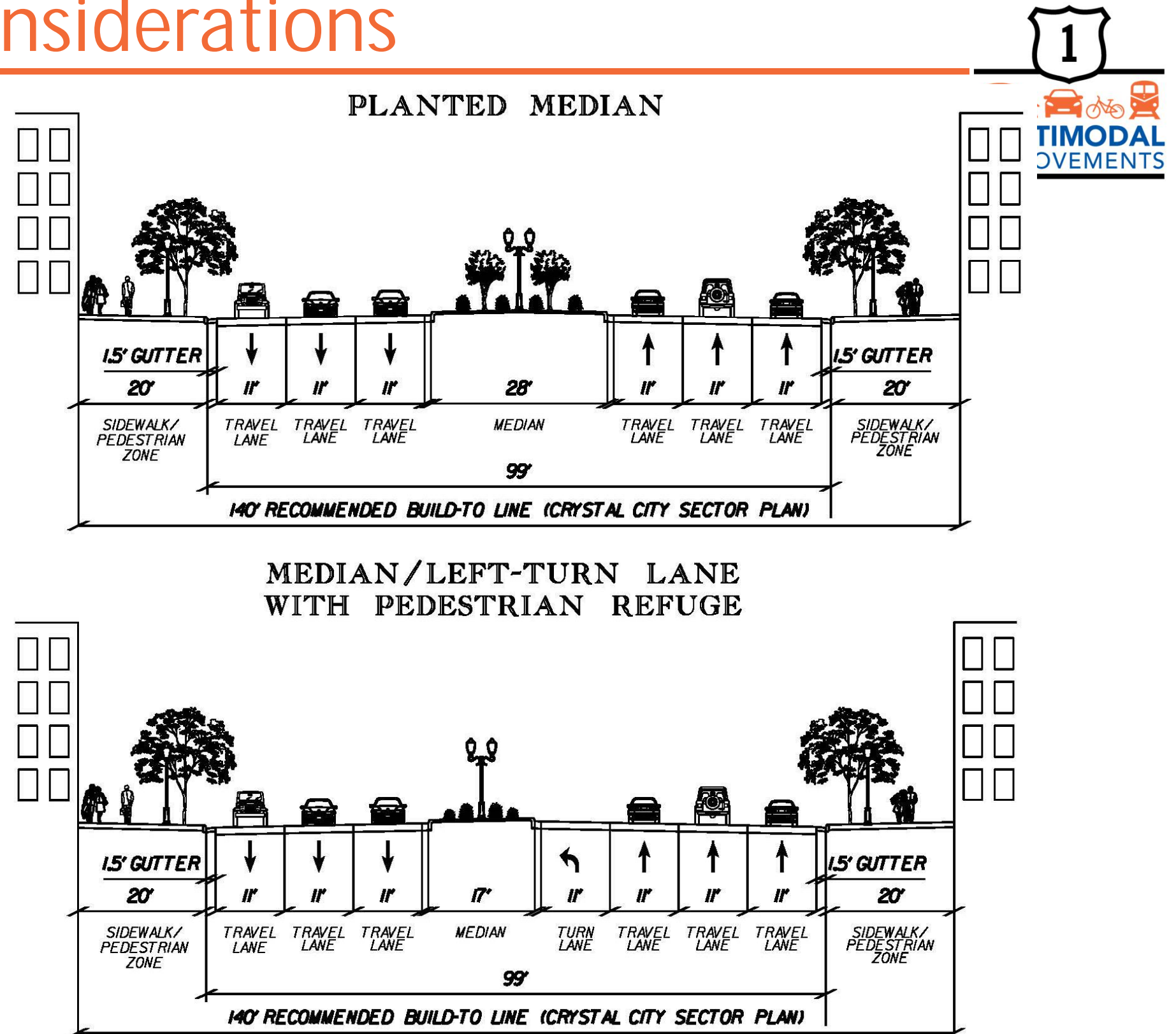


Sample intersection concept

Concept Design Considerations

Potential Route 1 Cross Sections

- 140 feet from RBL to RBL
- Arlington County curb and gutter
- 99 feet pedestrian crossing distance with refuge
- 11-ft lanes
- 30 mph design speed
- Sidewalk/Ped Zone sufficient for streetscape elements



Next Steps



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Studies

Route 1 Multimodal Improvements Study

A study for multimodal connectivity in the vicinity of Crystal City and Pentagon City

About the Study

U.S. Route 1 (Richmond Highway) is a major north-south arterial and part of the National Highway System. Regionally, Route 1 is a primary arterial road connecting Washington, D.C., Arlington County, the City of Alexandria, and southern suburbs including Fairfax and Prince William counties. Route 1 carries more than 45,000 vehicles per day in the Crystal City and Pentagon City area.

In late 2018, with the announcement of an agreement to bring [Amazon's new corporate headquarters to Crystal City](#), the Commonwealth of Virginia identified improvements to Route 1 as one of five transportation projects to be fully or partially funded by the Commonwealth. The Commonwealth's commitment to Amazon is to improve safety, accessibility, and the pedestrian experience crossing Route 1.

The purpose of this study is to identify enhanced multimodal connectivity and accommodations along and across Route 1 in Crystal City, to meet the changing

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How to Submit Your Comments



Comment Form

Give feedback on the virtual public information meeting in the following ways by January 11, 2020



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route1multimodalstudy@vdot.virginia.gov

Please reference
"Route 1 Multimodal Study"
in the subject line

Mail Us

Mr. Dan Reinhard, P.E.
VDOT's Northern Virginia District
4975 Alliance Drive
Fairfax, Virginia 22030

Comment

Online at
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THANK YOU!

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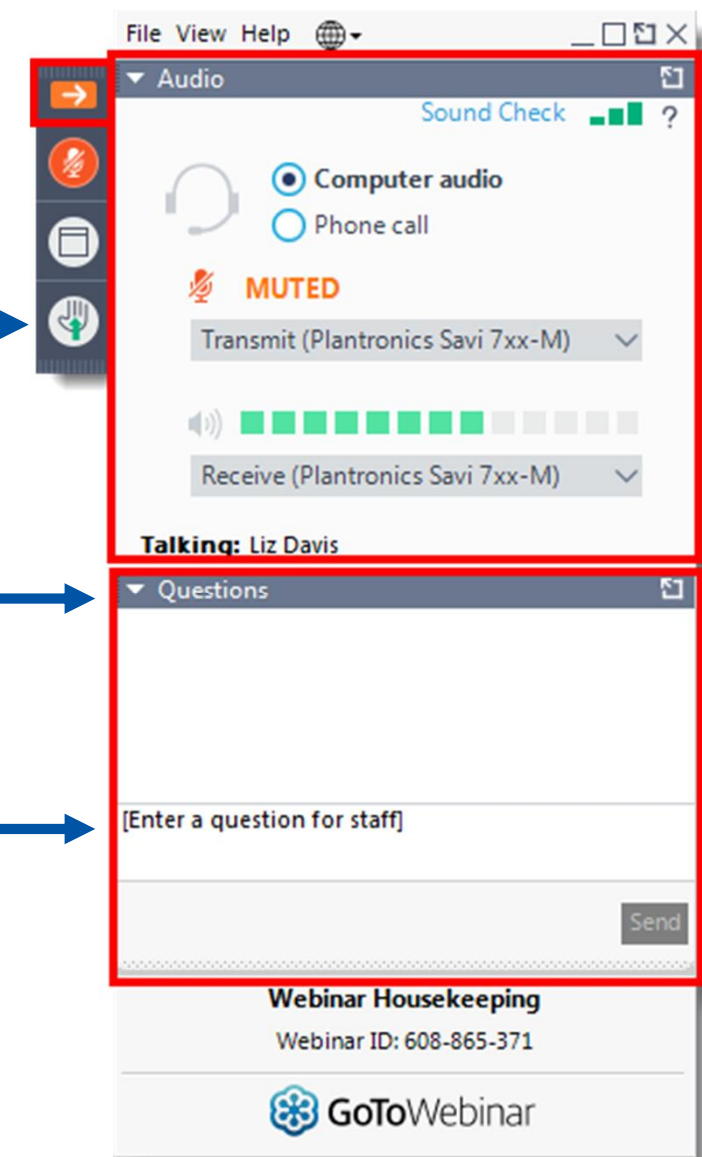


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